

## REMARKS

### I. Introduction

In response to the Office Action dated August 17, 2009, the claims have not been amended. Claims 1-6 and 8-16 remain in the application. Re-examination and re-consideration of the application, as amended, is requested.

### II. Double Patenting Rejection

In paragraphs (2)-(3) of the Office Action, claims 1 and 9 were rejected on the ground of nonstatutory double patenting over claims 1 and 13 of U.S. Patent Application No. 10/409,875 since the claims, if allowed, would improperly extend the “right to exclude” already granted in the patent.

Applicants acknowledge the double patenting rejection and reserve the right to file a terminal disclaimer once allowable subject matter has been identified.

### III. Non-Art Rejections

In paragraphs (4)-(5) of the Office Action, claims 1 and 16 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

Applicants respectfully traverse the rejections.

The Action first rejects the claim limitations relating to the tuning hardware configured to pass the encoded video programming in the vertical blanking interval and the vertical blanking interval software configured to decode the encoded video programming from the VBI. Applicants respectfully direct the attention of the Examiner to paragraphs [0059], [0069], [0106] and original claim 7 as filed which provide as follows:

**[0059]** Thus, users 18 will receive the normal television signal along with the transparent television signal via computer 64/66 and/or small wireless handheld PDA device 70. The computer 64/66 or handheld device 70 may host software applications that are required to receive the subscriber programming information. For example, the computer 64/66 or handheld device 70 contains television tuning hardware functions required to receive normal over the air broadcasts as well as to pass the transparent VBI and Active line information. VBI software present on the computer 64/66 and handheld device 70, receives the output of the tuner and subsequently decodes the VBI and Active line information. Further, the software may also contain forward error correction (FEC) as well as subscriber management, conditional access, and encryption functions.

**[0069]** Referring now to FIG. 3, one embodiment of a user device 88 is illustrated. Each user device 88 preferably is coupled to an antenna 62 as described above. Antenna 62 is coupled to a receiver 90 that receives the over-the-air signals and converts them into a useful format. Receiver 90 is coupled

to a filter 92 that has affinity information of the user therein. Filter 92 is coupled to a memory cache 94. Memory cache 94 and filter 92 are coupled to a display 96 that is used to display menu 72. Thus, receiver 90, filter 92, and memory cache 94 may provide tuning hardware functions required to receive normal over the air broadcasts as well as pass the transparent VBI and Active line information. Devices 90, 92, and 94 may also provide the capability to decode the VBI and Active line information as well as provide forward error correction, subscriber management, conditional access, and encryption functions.

**[0106]** Once broadcast, the normal television signal (along with the transparent television signal) may be received at a user device such as a computer or small wireless handheld device (e.g., a personal digital assistant [PDA]) (e.g., using a receiver card) at step 1406. The user device contains various functionality including the ability to manage received subscriber programming information (e.g., that is broadcast). The user device may also contain television tuning hardware functions (e.g., in a receiver card or other modules) required to receive the normal over-the-air broadcasts as well as to pass the transparent VBI and unused Active line information. VBI software on the user device may receive the output from the tuning hardware and decode the VBI and unused Active line information. Such software may also contain forward error correction (FEC) as well as subscriber management, conditional access, and encryption functions.

Original Claim 7:

7. The method of claim 1, further comprising receiving the broadcast video programming in a user device, wherein the user device comprises:
- (a) tuning hardware configured to receive normal over-the-air broadcasts and to pass the encoded video programming;
  - (b) vertical blanking interval software configured to:
    - (i) receive output from the tuning hardware; and
    - (ii) decode the encoded video programming;
  - (c) decompression software configured to:
    - (i) decompress the decoded video programming; and
    - (ii) output analog audio and video signals to a screen and speaker of the user device.

As can clearly be seen, there is more than sufficient support in the above quoted text for the claims and the claim language rejected by the PTO. Accordingly, Applicants respectfully request withdrawal of these rejections.

The Office Action then rejects claim 16 based on the software that has a subscriber management, conditional access, and encryption functions to control access to the video programming in the VBI and unused active lines. The Action then asserts that while the specification discloses FEC and other functions, it does not provide the same function as claimed in claim 16. Applicants respectfully disagree with such assertions and refer the Examiner to paragraphs [0059], [0069], [0106], [0017], [0046], [0050], [0080], [0083], [0089], [0090], [0099], and claim 16 as originally filed. In this regard, the Examiner is now rejecting claim 16 for lack of support in the specification while original claim 16 is considered part of the original specification and remains in its original form now. Accordingly, the exact language of claim 16 existed in the specification (as part

of original claim 16) when the application was filed. Thus, there is more than adequate support. Further, Applicants include paragraph [0080] which further supports the claim language:

[0004] To carry through with the vertical blanking interval (and unused Active lines) electronic content broadcast by broadcast infrastructure 118, an antenna 124 may be used to receive the entire broadcast television signal from antenna 119. This entire television signal includes both the regular broadcast channel as well as the digital electronic content embedded within the vertical blanking interval and unused Active lines. A TV tuner 120 is incorporated into the mobile device 122 so that selections of different programming may be accomplished. Vertical blanking interval frame grabbing software 126 is used to receive a compressed digital video signal transmitted within the vertical blanking interval and unused Active lines of the broadcast signal. The frame grabbing software 126 is coupled to decompression software 128 to decompress the compressed video signal. The decompressed video signal from decompression software 128 is displayed on an output device 130. Decompression software 128 may also include conditional access software. Conditional access software allows for only authorized viewing of the digital content on a memory. Such conditional access may be software coded into the device or provided on a separate card in a manner similar to that of the DIRECTV® system. Speakers may also be incorporated into output device 130 to provide audio simultaneously with the video.

Should the Examiner desire, Applicants would be willing to amend the specification to copy the text of claim 16 into the specification. However, Applicants submit that such amendments are not necessary in view of not only original claim 16 but the various paragraphs referenced above (only select paragraphs were expressly recited).

In view of the above, Applicants respectfully request withdrawal of the above rejections.

#### IV. Prior Art Rejections

In paragraphs (6)-(7) of the Office Action, claims 1-3, 5-6, 9-11, and 13-16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Krisbergh, U.S. Publication No. 20040078824 (Krisbergh) and further in view of Yoshimura, U.S. Patent No. 5,917,467 (Yoshimura). On page (10) of the Office Action, claim 8 was rejected under 35 U.S.C. §103(a) as being unpatentable over Krisbergh and further in view of James, U.S. Publication 20020019987 (James). On page (11) of the Office Action, claims 4 and 12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Krisbergh in view of Corvin, U.S. Publication No. 20010029610 (Corvin).

Specifically, independent claims 1 and 9 were rejected as follows:

Regarding claims 1, 9, and 16:

A method for providing broadcast video programming, comprising:

- (a) receiving video programming (Krisbergh teaches: Fig. 4 – the cable headend equipment; [0029]);
- (b) encoding the video programming into a vertical blanking interval and unused Active lines of a television channel (Krisbergh teaches: the television transmission may alternatively include one or

more *streams of data comprising video*, audio and other information in a digital and/or analog form. Accordingly, information can be inserted into these streams such as in the VBI as aforesaid or as part of an MPEG transport stream [0027]; Fig. 4/46);

(c) broadcasting the television channel and encoded video programming into a vertical blanking interval and unused Active lines of a television signal (Fig. 4/12)

(d) receiving the broadcast encoded video programming in a vertical blanking interval in a user device, wherein the user device comprises (Krisbergh teaches: Fig.6/terminal 54):

(iI) a mobile portable handheld device; Krisbergh does not specifically disclose a portable device. However, Yoshimura discloses PC card contains RF antenna terminal for inputting an RF signal from an external antenna for receiving a TV broadcast where the PC card system can receive a TV broadcast by a *portable* PC to display images on the LCD panel col. 11 lines 4 – 44, Fig. 4.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Krisbergh with the teaching of portable device for receiving a broadcast signal as further taught in Yoshimura to meet all limitation in claim 1.

(iiI) vertical blanking interval software configured to:

- (1) receive output from the tuning hardware (Krisbergh teaches: Fig.6/94,92); and
- (2) decode the encoded video programming from the vertical blanking interval (Krisbergh teaches: Fig. 6/98);

(IV) a screen and a speaker (Krisbergh teaches: Fig. 6/56; [0050]; and

(v) decompression software configured to:

(1) decompress the decoded video programming (Krisbergh teaches: processor 96 for decoding and decompressing the coded and/or compressed refresh information [0049]); and

(2) output analog audio and video signals from the decoded video programming to enable a user to watch the video programming on the screen and speaker of the user device (Krisbergh teaches: television signal is displayed on the display device – Fig. 6/56; the MPEG 2 data stream is composed of video, audio streams [0046]).

Applicants traverse the above rejections for one or more of the following reasons:

(1) Krisbergh, Yoshimura, James, and Corvin do not teach, disclose or suggest a single device that contains numerous required elements including tuning hardware, VBI software, a screen, a speaker, and decompression software;

(2) Krisbergh, Yoshimura, James, and Corvin do not teach, disclose or suggest a single device that has both a tuner and conditional access controls;

(3) Krisbergh, Yoshimura, James, and Corvin do not teach, disclose or suggest a single device that is mobile, portable, handheld, and provides the functionality as claimed.

Independent claims 1 and 9 are generally directed to receiving broadcast video programming in a user device. More specifically, video programming is encoded in the vertical blanking interval (VBI) and unused Active lines of a television channel. The television channel and encoded video programming is broadcast and received in a user device. The user device is configured to receive the normal over-the-air broadcasts (including the VBI) and to pass the encoded video programming

(from the VBI). In addition, the user devices have VBI software that receives output from the tuning hardware and decodes the encoded video programming (from the VBI). Further, not only does the user device have a screen and speaker but as previously amended, the user device is mobile, portable, and handheld. Further, the user device has decompression software that decompresses the decoded video programming and outputs analog audio and video signals to the screen and speaker of the user device itself.

In view of the above, it can be seen that the user device directly receives and tunes the broadcast television channel to receive video programming encoded in the VBI of the broadcast. Such a teaching is distinctly and uniquely nonobvious over the cited prior art.

Krisbergh merely describes an access system and method for providing interactive access to an information source through a television distribution system. The distribution system includes a television distribution network, headend distribution equipment at the headend of the distribution network, and a plurality of terminals at terminal ends of the distribution network. An input device and an upstream transmitter are associated with one of the terminals to input a command for the information source and to transmit the inputted command on an upstream channel of the distribution network, respectively. A headend server, upstream receiver, and data encoder are associated with the headend distribution equipment. The headend server is interfaced to the information source. The upstream receiver is interfaced to the headend server to receive and forward the command to the headend server. The headend server transmits the forwarded command to the information source, and the information source transmits responsive information to the headend server. A data decoder is interfaced to the terminal for decoding the encoded information from the television transmissions. The decoded information is then displayed on a display device. (See Abstract).

As recited above, the present claims explicitly require that the device contains both tuning hardware to receive the broadcast programming, as well as a speaker and screen to display the received information. In rejecting the claims, the Office Action relies on Fig. 6 and paragraph [0050] of Krisbergh to teach the screen and speaker of the device (see page 7 of Office Action). However, contrary to that asserted, FIG. 6 illustrates set top converters or terminals 54 that feed separately to a display device 56. In this regard, the set top converters are clearly not part of the display device itself. Paragraph [0050] further enforces such an interpretation:

[0050] Preferably, the terminal processor 96 and the memory 100 produce display information from the extracted information, and the display information is displayed on the display device 56. Preferably, the extracted information includes the screens rendered by the terminal display manager 88 of the application server 68. The process of producing display information by a set top terminal 54 and terminal processor 96 is well-known and need not be further described here.

The present claims specifically require that the speaker and screen are part of the device itself. Such a single device enables portability for the device to receive and view programming. However, Krisbergh cannot and does not provide such capabilities. Further, since Krisbergh requires a set top box that is separate from the display device, Krisbergh serves to teach away from the present invention.

The Office Action further relies even acknowledges Krsibergh's lack of teaching stating that Krisbergh does not specifically disclose a portable device. Again, the portable device aspects that include the all of the capabilities, as claimed, cannot be separated from each other – the claims explicitly and expressly require that the portable device not only contains the tuning hardware but also has the screen and speaker to watch the video programming. One cannot separate these aspects from each other and rely on one reference to teach a portable device and another non-portable device to teach VBI reception. Such a combination is not warranted in any of the cited references and is completely and entirely lacking from all of the cited prior art. Further, there is simply no motivation to combine such references as asserted in the Action.

The Action acknowledges Krisbergh's lack of teaching a portable device, relies on Yoshimura for a PC card, yet relies on Krisbergh for a portable device containing a screen and speaker. Such a combination of disparate concepts is neither logical, warranted, or permissible. Further yet, Yoshimura's portable device is a portable PC which is clearly not equivalent to "a mobile portable handheld device" as expressly claimed. In this regard, Yoshimura's laptop portable PC computer is not "handheld" as explicitly claimed. It is well known that a PC is a personal computer or laptop and PC with a PC card cannot be held in one's hand and is therefore not a "handheld device" as claimed.

In addition, the Action completely fails to set forth any motivation to combine Yoshimura with Krisbergh. Further, even if Yoshimura were to be combined with Krisbergh, the present invention would not result. Instead, one would be left with a portable PC that connects to Krisbergh's system – still failing to teach a portable hand held device with all of the capabilities

asserted. Again, the present invention relates to delivering compressed cable channels to a portable handheld device which is neither taught in the individual references separately or when combined.

In addition, Applicants note that dependent claims 8 and 16 provide that the device itself contains subscriber management, conditional access, and encryption functions to control access to the video programming. In rejecting such claim elements, the Office Action relies on James' VBI receiver and namely paragraph [0026]. Paragraph [0026] provides for a VBI transceiver with various level filters, channel scanning capability, message buffer, subscriber communications processing, a message processor having an encoder and decoder circuitry, PCS interface, etc. However, what is clearly missing is the capability for a single device to have both a tuner, a screen and speaker, as well as conditional access capabilities. In fact, the lack of such a teaching serves to teach away from the presently claimed invention.

As is known in the prior art, conditional access systems commonly have set top boxes. Such set top boxes use conditional access modules (CAMs) that are cards that provide/enable security for the received programming. However, such CAMS explicitly do not have a tuner within the card. Instead, the common and known prior art require the separation of the tuner that exists independently in the set top box itself from the CAM. The CAM and set top box are synchronized together to provide content to be displayed on a television. However, the prior art does not combine the tuner with the conditional access services provided in the CAM. There are multiple reasons for such a lack of a combination – (1) to ensure greater security; (2) to enable low cost card productions that do not include an integrated tuner; (3) if the device had both the tuner and conditional access controls, anyone with a card would have a portable and potentially untrackable access capability to proprietary programming. Such factors teach away from a single card that has both a tuner and conditional access technology as set forth in the present claims.

The teaching away aspect of the claims can be found in various prior art references. For example, US Patent No. 7,463,737 (at FIG. 11 and co. 8, lines 57-col. 9, line 17) clearly illustrates that conditional access modules 1170, 1171 are entirely separate from, and not in the same unit as, the tuners 1020, 1021. Such a reference is merely an example of the many references that require and utilize a tuner in a completely separate module from that of the conditional access programming which exists in a conditional access module (CAM).

In view of the above, it can be seen that while James or Krisbergh may teach the receipt of VBI, they both fail to also teach conditional access technology/controls within the same card. There is a reason for this as is evidenced and as is well known in the prior art. Further, none of the cited references even remotely allude to adding or combining such technology into a single card. The prior art in fact teaches away from such a combination and accordingly, there is no motivation to combine but instead there is a motivation not to combine the references in the manner suggested in the Office Action. Further, the overwhelming prior art actually teaches away from what the Examiner asserts is obvious. Such a teaching away indicates clear error in the Office Actions and a failure to establish a prima facie case of unpatentability.

Applicants further submit that while one cannot attack prior art references individually, there must be some motivation to combine the references (even under KSR). Instead of finding a motivation, the prior art clearly teaches away from the present invention.

In response to the above previously submitted arguments, the pending Office Action simply ignores these arguments. Nonetheless, the prior final Office Action first asserts that Krisbergh teaches the claimed user device in Krisbergh's set top terminal 54 and FIGs. 5/70 and 5/56. As clearly illustrated in FIG. 1, Krisbergh's item 54 is a settop converter that is connected to a display device 56. Thus, they are completely separate devices. Again, the claims provide for a single user device that has multiple functionalities and not separate components as suggested by Krisbergh. FIG. 5/70 is a settop communications module and FIG. 5 does not have a label 56. Instead, as again illustrated in FIG. 6, display device 56 is completely separate from device 54. The supporting text in paragraph [0030] states:

...As should be understood, each terminal 54 is for selecting one of the downstream channels 20 and is for being interfaced to a display device 56 for displaying the television transmission 24 carried on the selected downstream channel 20. Typically, the display device 56 is a tunable television set, although one skilled in the art will recognize that a non-tunable television monitor may also be employed without departing from the spirit and scope of the present invention.

Thus, as stated above, rather than teaching a single device, as claimed, the prior art serves to actually teach away from the present invention by specifically describing multiple devices. In addition, Applicants dispute the state of the art upon which the Examiner relies. In this regard, as evidenced above but Patent No. 7,463,737, CAMs are separate modules from the tuners.



Again, the Examiner continues to assert that Krisbergh's user device has the speaker and screen as well as the other components. Applicants respectfully disagree with such assertions. In addition, to more fully differentiate Krisbergh's device from that of Applicant's, the claims were previously amended to recite that the claimed user device is mobile, portable, and handheld. Nowhere in Krisbergh or any of the cited references is there even a remote possibility for Krisbergh's terminal to be mobile, handheld, or portable, in any way, shape, or form. As illustrated by all of Krisbergh's figures, the display device 56 is clearly not portable, is not handheld, and is not mobile – instead, it is large, stationary, and consistent with the prior art that the present invention overcomes in that Krisbergh falls in line with a traditional television broadcast system. There is simply no capability to compare Krisbergh with that of the presently claimed invention. Further, Yoshimura and the other cited references fail to cure Krisbergh's deficiencies.

Moreover, the various elements of Applicants' claimed invention together provide operational advantages over Krisbergh, Yoshimura, James, and Corvin. In addition, Applicants' invention solves problems not recognized by Krisbergh, Yoshimura, James, and Corvin.

Thus, Applicants submit that independent claims 1 and 9 are allowable over Krisbergh, Yoshimura, James, and Corvin. Further, dependent claims 2-6, 8, and 10-16 are submitted to be allowable over Krisbergh, Yoshimura, James, and Corvin in the same manner, because they are dependent on independent claims 1, and 9, respectively, and thus contain all the limitations of the independent claims. In addition, dependent claims 2-6, 8, and 10-16 recite additional novel elements not shown by Krisbergh, Yoshimura, James, and Corvin.

V. Conclusion

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Respectfully submitted,

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